

ABSTRACT OF THE DISCLOSURE

An ultrasonic apparatus is provided for producing three dimensional images using at least one moving curved array transducer for scanning a volume of a region of interest to be imaged. The apparatus includes an acoustic front shell having complex shape and an ultrasonic transducer adapted for swinging movement underneath the front shell and having a front surface of a shape conforming to the complex shape of the front shell. A motor provides the swinging movement of the ultrasonic array transducer underneath the front shell so as to scan a volume of the region of interest. The shell and a transducer carrier may be of an ovoid shape. The transducer may include lips at superior edges thereof which contain a coupling grease. Multiple transducers for different applications may be employed.